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24. *AERIDES ROSEA* LODD. EX LINDL. & PAXTON (ORCHIDACEAE) – A NEW RECORD FROM THE ANDAMAN AND NICOBAR ISLANDS, INDIA

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The Andaman and Nicobar Islands in India is a repository of diverse plant species, including 125 species of orchids of which 25 species are endemic to this group of islands (Singh *et al.* 2003). There are 47 plant species on these islands, which do not occur on mainland India.

During a cursory visit to the middle Andamans in February 2009, an epiphytic orchid was collected from the beach forest of the Vandoor Marine Park. The habit of this species resembled *Aerides multiflora* Roxb., except that the inflorescence (of the previous year) of this plant was arched, not pendulous, as in the latter species. This plant flowered under cultivation in the orchidarium of the Regional Plant Resource Centre (RPRC) at Bhubaneswar during April 2010 and May 2011. It was identified as *Aerides rosea* Lodd. ex Lindl. & Paxton, popularly known as Fox Brush plant. *Aerides rosea* is known to occur in mainland India, but not from the Bay Islands. The scientific illustration (Fig. 1a–k and Fig. 2a–c) along with morphological description for this species is provided here.

Aerides rosea **Lodd. ex Lindl. & Paxton**

Paxton's Fl. Gard. 2: 109, t.60.1853; Seidenfaden, Opera Bot. 95: 249. 1988; Chowdhery & Pal, Orch. Arunachal Pradesh: 14. 1997; Pradhan & Pradhan, Beaut. Him. Orch.: 30. 1997; Kumar in Pathak *et al.* (ed.), Orch. Sci. & Com.: 111. 2001; Deb *et al.*, J. Orchid Soc. India 17(1-2): 7. 2003; Pearce & Cribb, Orch. Bhutan: 495. 2002. *Aerides fieldingii* B.S. Williams, Orch. Grow. Man. 2.ed.: 39. 1862; Hook.f., Fl. Brit. India 6: 45. 1890; Fischer, Rec. Bot. Surv. India 12(2): 135. 1938; Panigrahi, Proc. Nat. Acad. Sci. India Sect. B 36: 127. 1966. *Aerides williamsi* Warner, Sel. Orch. Pl. 1: 21. 1862; Pradhan, Ind. Orch. Guide to Iden. Cult. 2: 546. 1979; Hegde, Orch. Arunachal Pradesh: 71. 1984. *Aerides multiflora* auct. non Roxb. Corom. Pl. 3: 63, t.271. 1820; Dev & Naithani, Orch. Fl. North West Him.: 361, t.205. 1986.

Type: INDIA: Meghalaya (Jaintea Hills), *sine loc.* Loddiges 1530 (holo K-LINDLEY)

Morphological description: Scattered epiphytes with monopodial growth habit. Stem erect 10–15 cm long, 13–15 mm thick, clothed with leaf bases, rooted below. Roots terete, 4-5 mm thick. Leaves strongly arched, deeply channeled, narrow-oblong, slightly tapered to the unequally rounded bifid mucronate apex, fleshy, 12–35 cm long, 16–30 mm wide. Inflorescence one to two per plant, axillary, simple, or with a small (5–9 cm long) branch at the base, arched; peduncle 5.5–13 cm long, 2.5–4 mm thick, with two sheathing tubular and one deflexed brown sterile bract; raceme dense flowered 10–40 cm long, 3.5–4 cm across. Floral bracts oblong-lanceolate, acute, brown, persistent, 4.75 x 2.5 mm. Pedicel and ovary 16 mm long, four-angled, pinkish-white. Flowers pale rose, fragrant, 13.5–20 mm across. Dorsal sepal elliptic-obovate, apiculate, 8 x 5.5 mm, 5-veined; lateral sepals broadly and obliquely ovate, obtuse, 5-veined, 6.5 x 6.5 mm. Petals obovate-oblong, obtuse, 3-veined, 7.5 x 4.4 mm. Lip continuous with the column-foot, immovable, 3-lobed,

Table 1: Key morphological features of *A. multiflora* and *A. rosea*

Feature	*A. multiflora*	*A. rosea*
Leaves	Turn purple-red in dry season	No change in colour in dry season
Inflorescence	Pendulous, mostly simple	Arched, simple, or often branched
Pedicel and ovary	5–7 mm long, 3-angled	16 mm long, 4-angled
Flower	Perianth purplish white with purple-pink blotches; lip purple-pink; inodorous	Perianth pale rose; pleasantly fragrant
Lip Midlobe	Cordate, apex truncate, rounded	Triangular, apex sub-acute
Spur	Back wall right-angled	Back wall stretched forward in a slope

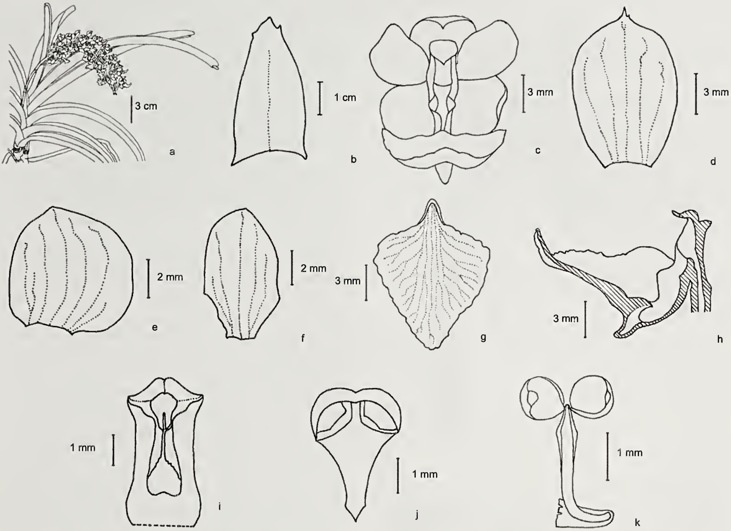

Fig. 1: *Aerides rosea* Lodd. ex Lindl. & Paxton: a. plant, b. bract, c. flower, d. dorsal sepal, e. lateral sepal, f. petal, g. lip, h. section through column and lip, i. column, j. operculum, k. pollinarium (after S. Misra TOB 463; drawing and inking: S. Misra).

spurred; midlobe pointing forward, triangular, sub-acute, margin undulate, 5-veined, 10 x 10 mm; spur porrect, very short, broadly conical, 2 mm long; lateral lobes small, incurved over entrance to the spur. Column 5 mm long, 2–2.5 mm wide, winged along the stigmatic slit. Stigma narrow-triangular; rostellum beaked, bifid above with a narrow slit in between. Anther depressed, cream-coloured, narrowly ovate in outline, apiculate, 4 x 2 mm, 2-chambered, each chamber with a broad-ovate-truncate flap covering the pollinia. Pollinia two, yellow, globose, deeply foveolate, each 0.8 mm across; stipe linear, upper portion folded in, 2.8 mm long; viscidium foot-shaped, 1.2 mm long. Capsules obovoid, ridged, shortly stalked, 15 x 8 mm.

Flowering: April–May; lasting for about three weeks.

Ecology: In tropical seashore forest, in open condition, at low heights in Andaman; elsewhere in montane evergreen forests.

Occurrence: Middle Andaman, Vandoor marine park; occasional.

Distribution: INDIA: Uttarakhand, Sikkim, Meghalaya, Arunachal Pradesh, Nagaland, Andaman and Nicobar Islands; Bhutan; Bangladesh; Myanmar; China; Thailand; Laos; Vietnam.

Specimens examined in CAL:

INDIA: Meghalaya (Jaintea hills). Prain's collector 75 (2 sheets); Khasia. Coll.: R. Pantling *sine no.* (both labelled *Aerides fieldingii*). Sikkim: Coll.: R. Pantling 446 (labelled *Aerides multiflora*). Assam: *sine loc. Mann. Sine no.* (labelled *Aerides fieldingii* by Mann and determined as *Aerides multiflora* by R. Pantling). Eastern Himalaya: *sine loc.* Coll.: *Griffith* 5223 (labelled as *Aerides multiflora*). Andaman & Nicobar Islands: Middle Andaman, Vandoor Marine Park. Coll.: S. Misra TOB 463; under cultivation at RPRC. BANGLADESH: Sylhet: Coll.: C.B. Clarke 7173 (labelled as *Aerides affine*; determined as *Aerides multiflora* by R. Pantling).

There is no representation of this species under the name *Aerides rosea* in CAL. A few specimens labelled / determined

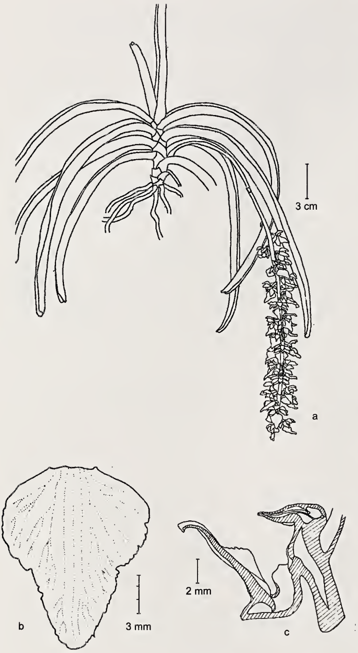

Fig. 2: *Aerides multiflora* Roxb.: a. plant, b. lip, c. l.s. through column and lip

as *Aerides fieldingii* or *Aerides multiflora* were robust plants (Griffith 5223 leaves are 35 cm long, 30 mm wide; inflorescence 53 cm long, peduncle 4 mm thick); inflorescence branched and the midlobe of the lip appeared triangular, acute. C.B. Clarke provided a sketch of the lip where the midlobe is triangular, acute, instead of cordate, obtuse, and identified as *Aerides rosea*. The flowers here are however, medium sized (15–20 mm) and the pedicel is only 7–8 mm unlike 16 mm long in the Andaman plants. A plant from the Kachin hills of Myanmar, with a branched inflorescence was identified by R. Pantling as *Aerides fieldingii*. We have not included this under *Aerides rosea* as this specimen lacked flowers.

Taxonomic note: This plant was originally collected by Loddiges and grown in Kew Gardens. Paxton prepared a plate for this, which is now in the Kew Herbarium. Authors in the past have separated *Aerides rosea* from *Aerides multiflora* in many ways. According to J.D. Hooker (1890), *A. rosea* is a much more robust plant; the midlobe of the lip is hastate, with an acute apex, while in *A. multiflora* the midlobe of the lip is hastately ovate and its tip rounded. King and Pantling (1898) too opined that *A. rosea* is a more robust plant with wider, flat leaves; larger flowers; according to them, it was not recorded from Sikkim. Kumar (2001) has included *A. rosea*.

Seidenfaden (1988) separated the above two species and provided text figures and photographs. According to him, the midlobe of the lip is triangular, acute in *A. rosea* but heart-shaped, tip emarginate-truncate in *A. multiflora*. According to Pradhan and Pradhan (1997), who too have provided photographs for these two plants, *A. rosea* has larger (30 mm), rose-purple coloured flowers; the 30–60 cm long flower spike is often branched. *A. multiflora* is a dwarf plant, often forming large clumps that can measure 90 cm across; the flowers are smaller (20 mm), white, flushed with purple-pink. According to Pearce and Cribb (2002), in *A. rosea*, the midlobe of the lip is triangular, apex acute; pedicel and ovary more than 10 mm long. In *A. multiflora*, the midlobe of the lip is cordate, apex emarginate-truncate; pedicel and ovary less than 10 mm long.

Deva and Naithani (1986) have examined many specimens from north-west Himalaya. They have provided two different figures: midlobe of lip cordate, rounded (fig. 204) and midlobe triangular, acute (fig. 205) for the Garhwal plants from Ajabpur (Deva 2589) and Rajpur (Deva 2950) areas respectively. They have treated both these under *A. multiflora* and suggested cytotaxonomic study for distinguishing one from the other. We are of the opinion that the specimens from Rajpur, with a triangular midlobe of the lip are *A. rosea*. *Aerides multiflora* is a common orchid and found in a number of habitats in Orissa. This is a medium-sized plant growing in scattered condition; sometimes older plants of these form tufted clumps.

We have examined a live specimen of *A. rosea* from only one locality in the Andaman Islands. The habit of this plant is more or less similar to *A. multiflora*; it is not a robust plant as those observed on the Indian mainland. The various morphological features examined by us and tabulated below indicate that *A. rosea* is a good and uncommon species. It forms now a new record to the flora of the Andaman and Nicobar Islands.

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25. NEW RECORDS OF WILDLIFE FROM THE CHITTAGONG HILL TRACTS OF BANGLADESH

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The Chittagong Hill Tracts (21° 25'–23° 45' N; 91° 54'–92° 50' E) is the most remote and least explored area in Bangladesh. It is situated in the southeastern part of Bangladesh along the borders of Mizoram and Tripura states of India, and Myanmar. The total area is about 13,184 sq. km, which is divided into three administrative districts, namely Khagrachari, Rangamati, and Bandarban. The Chittagong Hill Tracts (CHT) is in the western end of Indo-Burma Biodiversity Hotspot (Conservation International 2012) at the confluence of two biogeographic sub-regions: Indo-Himalaya and Indo-China. The area is mostly hilly, covered by natural evergreen forests, bamboo, bush, and reeds, as well as shifting cultivation and plantations of timber trees. The climate is the tropical monsoon type with mean annual rainfall about 2,540 mm. Hills of the CHT are the highest elevation areas in Bangladesh, with Saka Haflong (or Tlangmoi) peak in the Bangladesh-Myanmar border having the country's highest elevation (more than 1,000 m). The human population density is the lowest in Bangladesh.

Due to its remoteness and low population, the biodiversity of the CHT is rich but is still unexplored, as indicated by the records of five vertebrate wildlife species new to Bangladesh which were recorded from November 2010 to November 2011. These species were recorded from sightings and photographs, and through capture and recording of measurements in the case of frog species. These comprise of a squirrel, a bat, a turtle, and two frog species. All the five new records were published, with colour photos, in the most popular daily newspaper of Bangladesh *Prothom Alo* (December 04, 2010 for the two mammals, October 10, 2011 for the two frog species, and December 23, 2011 for the turtle). These species are not listed in the recent checklists of wildlife of Bangladesh (Ahmed *et al.* 2009a; Kabir *et al.* 2009; Khan 2008; Khan 2010). Among the other sightings are those of several rare species of bird and a frog. The new records and other interesting sightings are discussed in this article:

A Himalayan Striped Squirrel *Tamiops macclellandi* was found foraging along the branches of a medium-sized tree in evergreen forest on a slope of Capital Hill (21° 53.33' N; 92° 31.49' E) in Theikkang, Ruma, Bandarban, on November 22, 2010, in the morning. It was a small squirrel with a relatively big head and greyish brown back with four black, brown, and buff stripes, which agrees with the characteristics of the Himalayan Striped Squirrel. It was significantly smaller than the other two striped squirrels of the region: Indian Palm Squirrel *Funambulus palmarum* and Northern Palm Squirrel *F. pennantii* (Menon 2003; Prater 1980). The nearest known distribution of this species is in north-east India (Menon 2003).

A colony of about 40 Least Leaf-nosed Bat